



GOVERNMENT OF INDIA  
**TARIFF COMMISSION**

**REPORT**

ON

**The Continuance of Protection to the Piston  
Assembly (Pistons, Piston Rings and  
Gudgeon Pins) Industry**

**BOMBAY 1960**

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(ii)

4. The attention of the domestic manufacturers of internal combustion engines of all types is invited to the former part of recommendation (3) regarding arrangements for obtaining their requirements of Piston Assembly and components from indigenous sources. Government have taken note of the latter part of the recommendation regarding Import Policy.

5. The attention of those units of the Piston Assembly industry who have entered into foreign collaboration, is invited to recommendation (4).

6. The attention of the Aluminium industry is drawn to recommendation (5).

#### ORDER

ORDERED that a copy of the Resolution be communicated to all concerned and that it be published in the Gazette of India.



GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE AND INDUSTRY

*New Delhi, the 7th October, 1960.*

**RESOLUTION**

**Tariffs**

**No. 53(1)-T.R./60.**—The Tariff Commission has submitted its Report on the continuance of protection to the Piston Assembly (Pistons, Piston Rings and Gudgeon Pins) Industry on the basis of an inquiry undertaken by it under sections 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows:—

- (1) Chromium plated rings should be brought within the scheme of protection and protection to piston assembly industry should be continued at the existing rates of duty for a further period of three years ending 31st December, 1963.
  - (2) The Development Wing should ascertain from piston manufacturers the specifications and quality of pig iron required by them and should arrange with the Iron and Steel Controller to plan the requirements of the Industry and place allocations with those producers who can make pig iron according to the specifications of the piston manufacturers.
  - (3) It is reiterated that the domestic manufacturers of internal combustion engines of all types should finalise their arrangements for obtaining their requirements of piston assembly and components from indigenous sources. Further the import policy should be so framed as not to retard the implementation of the above recommendation.
  - (4) The units who have entered into foreign collaboration should take steps to get the restrictive provisions regarding exports suitably modified in their own interests as well, as for the development of export trade.
  - (5) The indigenous Aluminium industry, if it could not augment its supply of aluminium alloy ingots, should not at least reduce the supplies to piston manufacturers below the existing levels.
2. Government accept recommendation (1). The duties recommended by the Commission in respect of chromium plated trunk piston rings of diameter 6 inches and below are being brought into force with immediate effect under notifications published separately in the Gazette today. The necessary legislation will also be introduced in due course.
3. Government have taken note of recommendation (2) for suitable action to the extent possible.

GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE AND INDUSTRY

New Delhi, the 7th October, 1960.

**NOTIFICATION**

**Tariffs**

**No. 53(1)-T.R./60.**—In exercise of the powers conferred by sub-section (1) of section 3A of the Indian Tariff Act, 1934 (32 of 1934), as in force in India and as applied to the State of Pondicherry, the Central Government hereby directs that with immediate effect there shall be levied on the articles specified in column (1) of the table hereto annexed, when imported into India or the said State, a duty of customs of such amount as is specified in the corresponding entry in column (2) thereof.

**TABLE**

Name of article	Amount of duty of customs [inclusive of the duty chargeable under sub-section (1) of section 2 of the Indian Tariff Act, 1934]
(1)	(2)
The following articles adapted for use as parts and accessories of internal combustion engines of all kinds other than those dutiable under Item Nos. 72(30), 75(10)(i) and 76 :—	
Chromium plated trunk piston 50% <i>ad valorem</i> . rings of diameter 6 inches and below.	

K. R. F. KHILNANI,  
*Joint Secretary to the Government of India.*

## **PERSONNEL OF THE COMMISSION**

SHRI K. R. P. AIYANGAR . . . . .	<i>Chairman.</i>
DR. S. K. MURANJAN, D.Sc. (LONDON) . . . . .	<i>Member.</i>
SHRI J. N. DUTTA . . . . .	<i>Member.</i>
SHRI R. S. BHATT . . . . .	<i>Member.</i>

**SECRETARY**  
**DR. RAMA VARMA**



## REPORT ON THE CONTINUANCE OF PROTECTION TO THE PISTON ASSEMBLY (PISTONS, PISTON RINGS AND GUDGEON PINS) INDUSTRY

1. The claim of the piston assembly industry to protection was first examined by the Commission in 1955 and in its Report to Government in May 1955 it recommended that protection to the industry should be granted till 31st December 1957 by levying a protective duty of 50 per cent *ad valorem*, standard (with suitable adjustments for preferential rate of duty in accordance with the Indo-U.K. Trade Agreement), on trunk piston assemblies of 6". diameter and below, piston rings (excluding chromium plated rings) and gudgeon pins required for such piston assemblies imported separately; provided that the articles are adapted for use as parts and accessories of internal combustion engines, but excluding those adapted for use exclusively as parts and accessories of engines of agricultural tractors and aeroplanes. Government accepted those recommendations and protection to the industry was granted by the Indian Tariff (Third Amendment), Act, 1955. In 1957 the Commission undertook a review of the progress made by the industry and of the adequacy or otherwise of the protection granted to it. In its Report submitted in May, 1957 it recommended continuance of protection upto 31st December 1960 at the prevailing rates of duty. Government accepted those recommendations and protection at the existing rates has been continued upto 31st December 1960 by the Indian Tariff (Second Amendment) Act, 1957.

2. The present inquiry is undertaken by us under Section 11(e) read with Section 13 of the Tariff Commission Act, 1951, which empowers us to inquire into and report on any further action required in relation to protection granted to an industry with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

3.1. Questionnaires to producers, consumers and importers of piston assembly (including pistons, piston rings and gudgeon pins) were issued on 1st February 1960. The Development Wing and the Development Commissioner, Small Scale Industries, were requested to submit a memorandum indicating the present position of the industry in the sectors covered by them. Information about the supply position of aluminium alloys was also obtained from the producers of aluminium. Enquiry regarding c.i.f. prices of imported piston assembly and parts thereof was made from the Collectors of Customs at the main ports. The State Governments were requested to place their views before the Commission if they were so interested in this inquiry. By a press note issued on 2nd February 1960 the views of persons, firms or associations who were desirous of communicating their views in connection with this inquiry were invited in terms of the relevant questionnaire. A list of firms and bodies to whom questionnaires/letters were issued and from whom replies or memoranda were received is given in Appendix I.

3.2. The Chairman and Members of the Commission visited the factory of India Pistons (Private) Ltd., at Madras on 12th January, 1960. Shri K. R. P. Aiyangar, Chairman and Shri R. S. Bhatt, Member, visited the factory of Goetze (India) Private Ltd., at Bahadurgarh (Patiala) on 20th February, 1960. The Chairman visited also the factory of Hindustan Pistons (Private) Ltd., Madras on 25th April 1960. Dr. S. K. Muranjan, Member, visited the factory of Precision Metal Works, Dharwar on 28th April 1960. Shri Hari Bhushan, Technical Director (Engg. and Met.) visited the factory of India Pistons (Private) Ltd., on 14th March 1960.

3.3. The cost of production of pistons, piston rings and gudgeon pins at the factory of India Pistons (Private) Ltd., was examined by Shri S. R. Mallya, Assistant Cost Accounts Officer of the Commission from 18th to 24th February 1960. Details of the costing were discussed with the representatives of India Pistons on 1st April, 1960.

3.4. The public inquiry into this industry was held on 31st March, 1960. A list of those who attended it is given in Appendix II.

4.1. The present scheme of protection to the piston assembly industry, as incorporated in Item No. 75(12A) of the First Schedule to the Indian Tariff Act, 1934, is confined to (a) trunk piston assemblies of diameter 6" and below, (b) trunk pistons of diameter 6" and below, (c) trunk piston rings excluding chromium plated rings of diameter 6" and below and (d) gudgeon pins required for trunk pistons of diameter 6" and below: provided they are adapted for use as parts and accessories of internal combustion engines of all kinds, but excluding such articles as are adapted for use exclusively as parts and accessories of internal combustion engines of agricultural tractors and aeroplanes.

4.2. At the time of the last inquiry the industry had represented that the scope of the inquiry should be enlarged to cover chromium plated rings and cylinder liners. We then observed that as production of chromium plated rings had not started in the country at that time it would be premature to include them within the scope of our inquiry. In regard to cylinder liners we suggested that the inquiry should be taken up separately if found necessary.

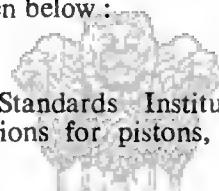
4.3. Production of chromium plated rings has since been started both by India Pistons (Private) Ltd., as well as Goetze India (Private) Ltd., and they are now in a position to meet the domestic demand. The industry has, therefore, repeated its request for the inclusion of chromium plated rings within the scope of the inquiry. The producers contended that the exclusion of chromium plated rings from the scope of protection would lead to misuse of licences issued for the import of items not produced in the country. Consumer interests as well as representatives of automobile manufacturers present at our inquiry did not object to the request and we have, therefore, decided to include chromium plated rings within the scope of our present inquiry.

4.4. A suggestion was made by some importers and one oil engine manufacturer that as India Pistons Ltd., is not interested in the manufacture of cast iron pistons that item should be excluded from the scope

of protection. It is doubtless true that the modern trend is to switch over from cast iron pistons to aluminium alloy pistons for internal combustion engines, and cast iron pistons, as far as automobiles are concerned, are required only as replacement for older models. We have, however, been assured that cast iron pistons are being made by some of the smaller manufacturers, particularly for stationary engines. In the circumstances, we have decided not to exclude cast iron pistons from the scope of protection. It was also urged by an importer that it would be unnecessary to give gudgeon pins protection as part of the piston assembly, on the ground that they could be obtained separately and that their wear is generally less. We did not agree with this suggestion as major indigenous producers do not appear to sell pins separately. The proper fit of the gudgeon pin with the piston is an important matter on which we have, even as it is received complaints about indigenous piston assemblies. To deprotect gudgeon pins at this stage would, in our view, frustrate the proper development of the manufacture of piston assemblies.

5.1. Apart from our main recommendation for the continuance of protection, we made a few other recommendations in our last Report.

**Implementation of previous recommendations of the Commission vide its report 1957**



5.2. (i) "The Indian Standards Institution should endeavour to finalise standard specifications for pistons, piston rings and gudgeon pins as early as possible."

As explained in our report of 1957 the ISI had delayed formulation of standards for pistons, piston rings and gudgeon pins awaiting the decision to change-over to the metric system and suggested that till standards for piston rings could be evolved there would be consequential delay in standardisation of pistons and other associated components. We understood from the representative of the ISI that not much progress has been made in the matter. Representatives of automobile manufacturers and manufacturers of piston assemblies as well as consumers whom we consulted during our inquiry have all agreed that the industry is in no way handicapped by the absence of ISI standards for piston rings, etc. Automobile manufacturers do not appear to be interested in the matter as most of the automobile engines assembled or manufactured in India are made in collaboration with overseas manufacturers and pistons, piston rings, etc., have, therefore, to conform to the designs and specifications of the overseas manufacturers of engines and to be approved by them. As the manufacturers of piston assemblies have been endeavouring to produce articles to the specifications given by the automobile manufacturers there have been very few complaints. Furthermore, as there are so many designs of pistons and piston rings to match engine designs, an elaborate or comprehensive prescription of standards for these items whether as original equipment or as replacement parts may not be feasible. We understand that a draft B. S. Specification recognised these difficulties and sought to standardise piston assembly parts only to ensure interchangeability of associated components like gudgeon pins, rings and circlips. In the circumstances, we

consider that our original recommendation that the ISI should evolve standards for piston assemblies including their components need not be further pursued, except to the limited extent indicated above.

5.3. (2) "Indian Pistons Ltd., should make determined efforts to tighten its inspection procedure and to ensure that no complaints on this account are made by any class of consumer".

The company has informed us that it has a fully equipped laboratory for testing all raw materials and has instituted an inspection system at all stages of manufacture. It has also stated that the final inspection of finished products prior to despatch to the consumer is done on a cent per cent basis. It has claimed that its inspection facilities would compare well with those in foreign countries. Further, for functional tests it is working in close liaison with the Indian Institute of Science, Bangalore and we have been shown reports of tests conducted by the Institute. It has claimed that although more than a million pistons and sixteen million rings had been supplied and a third of the vehicle population in the country is fitted with India Piston products, no case of piston failure has been reported so far. The company is also installing a dynamometer to help it in various stages of designs and checking of performance and thus improve quality control. Though complaints had been received with regard to piston gradings, gudgeon pin bore and fit, we understand from the company's representatives as well as from manufacturers' representatives that they are being removed to the satisfaction of engine manufacturers, as and when they arise and with the intensifying of the inspection the occasion for complaints should also diminish.

5.4. (3) "India Pistons Ltd., should endeavour to rationalise its production programme and concentrate efforts on the manufacture of such types and sizes as are most in demand in the replacement market for all internal combustion engines automotive as well as stationary".

The company has now informed us that after the last inquiry it started to rationalise its production programme and has been concentrating its efforts on the manufacture of such types and sizes which are more in demand in the country. In this process it has given up production of cast iron pistons and also reduced the number of types of pistons and rings for current production from over a hundred to about forty. It has, however, assured us that it is willing to execute any order of not less than two thousand units, which it considers as the minimum quantity for economic manufacture, of makes not covered in its present manufacturing programme. In other cases covered by the manufacturing programme it may accept orders for even 250 units. It has stated that though always ready to diversify production its experience of starting production in anticipation of demand or ahead of trial orders from engine manufacturers which entails delay has not been a happy one, as it has involved the company in avoidable loss on costly tooling and equipment for making samples and holding of stocks.

5.5. (4) "The indigenous manufacturers of automobiles, motor cycles and scooters, diesel engines (both automotive and stationary) and

of other types of internal combustion engine should expedite their negotiations with India Pistons for obtaining their requirements of piston assemblies from the company".

Despite the fact that this was a cardinal recommendation for the proper development and functioning of the piston assembly manufacturing industry as an ancillary of the automobile industry, we regret to note that the progress in its implementation has not been satisfactory. The Development Wing has explained that it takes time for individual firms to obtain their requirements from India Pistons as it involves in many cases approval of the products by their foreign collaborators. In some cases the requirements might be small, making the order placed uneconomical for the piston manufacturers to tool up for production. It has further stated that imports of piston assembly, etc., are permitted only when the products are not likely to be available from indigenous sources. While steps have been taken in this regard there have still been complaints about the import policy not being sufficiently restrictive and allowing of importation by the trade or by so called actual users of the more popular types of pistons and rings needed for the replacement market. The *ad hoc* Committee on the automobile industry has given high priority in its recommendations to the proper development of ancillary industries. It too had received complaints that automobile manufacturers were not sympathetic to the ancillary industries and were trying to produce many items which had better be left to the latter. While on the one hand automobile manufacturers allege that the indigenous products are higher priced, on the other our inquiry shows that often specially low prices are quoted for original equipment of engines by overseas producers of ancillary products, who seek compensation by charging higher prices for replacement sales. The automobile manufacturers have also urged that unless suitable steps regarding quality are taken they may not be able to use components produced by the ancillary industries. But even where such test facilities are forthcoming and piston assembly and parts of similar design and quality are known to be used by overseas manufacturers of vehicles, avoidable delay appears to persist on the part of the domestic producers to secure approval of his collaborators for using the products of the ancillary industries. This is not a healthy sign in the development of the major industry as well as that of the ancillary industry as it defeats the purpose of protection. For automobiles manufactured in India regular procurement of piston assemblies from India Pistons obtains so far only in the case of Mahindra and Mahindra for Willys Jeeps, Standard Motors for Standard 10 and Vangard Premier Automobiles for Fiat, and Simpsons for Perkins. For Ambassador cars Hindustan Motors has been procuring only part of the castings from India Pistons and importing the rest. It does its own machining. For the Mercedes Benz for which Telco requires forgings for pistons, and for the Meadows engines manufactured by Automobile Products, the process of getting technical approval for the Indian made piston assemblies seems to be getting protracted. For Chevrolet and Bedford petrol engines manufactured by Hindustan Motors as well as for pistons for Lambretta scooters made by Automobile Products of India, although India Pistons has agreed to take orders for minimum economic volume of production which is set at not less than 2,000, the response from the

main producers has been tardy. Only in the case of industrial diesel engines the entire demand of engine manufacturers is met from indigenous sources. As regards agricultural tractors, India Pistons and Escorts claim that they will be prepared to meet the requirements of major tractor manufacturers when they establish production, e.g. Ferguson, David Brown, International, Fordson and Caterpillar, and of the replacement required by trade for the market. Hindustan Pistons also meets requirements of pistons for replacement of agricultural tractors of these and other makes. In the light of the position set out above we have to repeat our earlier recommendation that the domestic manufacturers of internal combustion engines of all types should finalise their own arrangements for obtaining their requirements of piston assembly and components from indigenous sources. We also recommend that the import policy should be so framed as not to retard the implementation of the above.

**6.1.** As in 1957, only two units, namely, India Pistons (Private) Ltd., and Goetze India (Private) Ltd., are borne on the list of the Development Wing. We understand that a licence has been issued to Escorts Agents (Private) Ltd., also an associate of Goetze India, to manufacture pistons in collaboration with Messrs. Mahle, a West German firm.

**Present position of the industry**

**6.2.** India Pistons (Private) Ltd., is located in a suburb of Madras. It produces piston assemblies, pistons, piston rings and gudgeon pins and liners, wet and dry. It has entered into a twenty-year technical collaboration agreement with Associated Engineering Holdings, a joint enterprise of the four leading manufacturers in the line in U.K., namely, Hepworth & Grandage Ltd., Bradford, Wellworthy Ltd., Lymington, Bricovmo Ltd., Yorkshire and Leeds Piston Rings and Engineering Co., Ltd., Yorkshire. The agreement provides for the technical know-how for the manufacture of centrifugal pot castings, pistons and liner castings, piston rings, gudgeon pins, cylinder liners, tappets, valve guides and valve seats. According to the agreement, the foreign collaborator receives an engineering fee of 5 per cent on sales. The manufacture of piston rings was started in June 1950, of pistons in 1952 and gudgeon pins in 1954 and the new expanded type Duaflex piston rings in 1955. The factory also established its own cast iron foundry in 1951 and aluminium foundry in 1957. There has been no change in the capital structure of the company since the last inquiry. The paid up capital as on 31st March 1959 stood at Rs. 25 lakhs in equity shares of Rs. 10 each, of which Simpson and Co. Ltd., the holding company, owns 208,748 shares. The number of workers employed has risen from 813 in 1957 and 889 in 1958 to 969 in 1959.

**6.3.** Goetze (India) Private Ltd., has its factory located at Bahadurgarh in Patiala District and is licensed to manufacture piston rings and sleeves the production of which started in July 1957. It also manufactures chromium plated rings. It has a technical collaboration agreement with Goetzwerke Friedrich Goetze A. G., of West Germany and the foreign collaborator has also purchased shares worth Rs. 2 lakhs and receives a royalty of 3 per cent of the value of net sales of piston rings. The authorised capital is Rs. 65 lakhs divided into 15,000 redeemable

preference shares of Rs. 100 each and 50,000 ordinary shares of Rs. 100 each. Subscribed capital is Rs. 23,36,800 of which Rs. 4,25,000 is preference capital.

6.4. Hindustan Pistons (Private) Ltd., Madras has an authorised capital of Rs. 5 lakhs and paid up capital of Rs. 1.55,000. It employs less than 50 workers and is engaged primarily in the manufacture of piston assembly for industrial and agricultural engines. It produces pistons for Allis Chalmers, Caterpillar, Clays, Ferguson, International, and Ruston and Hornsby.

6.5. The Development Commissioner, Small Scale Industries, has reported that one unit at Amritsar, Auto Piston Manufacturing Co., exclusively manufactures for Perkins, Mercedes and Ferguson engines. The capital of the company is only Rs. 40,000 and it employs six workers. It is claimed that it has turned out 220 sets of 6 pistons each in 1958-59. The Development Commissioner has also furnished us with a list of small scale manufacturers of pistons, piston rings and gudgeon pins which is given in Appendix III. Data relating to the capacity and investment in these small undertakings are neither complete nor satisfactory. It would appear that in the replacement market where they could compete, the custom arising for spares from repair and reconditioning work perhaps goes to them.

6.6. Ruston & Hornsby has told us that it is getting its requirements of piston etc., from Precision Metal Works, Dharwar.

7.1. In 1952, India Pistons was the only major producer with the following annual production capacity on single shift basis :—

<b>Capacity and production.</b>	Piston .. . . .	3'0	lakhs
	Piston rings .. . . .	22·8	"
	Gudgeon pins .. . . .	3·6	"

Its double shift capacity as stated by the company is in the ratio of 1·75 to the single shift capacity. It now makes duaflex piston rings (capacity 4·80 lakhs) and chromium plated rings. It has finalised an expansion programme in consultation with its collaborators and expects to implement it by the end of 1960 when its capacity on double shift basis is expected to rise to 10·5 lakhs pistons, 10·5 lakhs gudgeon pins and 63 lakhs rings. With its expansion which will be completed by the end of 1960, India Pistons claims that it will be able to meet demands of all engines including tractor.

7.2. Goetze (India) Private Ltd., went into production of piston rings at the beginning of 1957. Its capacity on single shift is 15 lakhs and on double shift 30 lakhs. It produces chromium plated rings also.

7.3. Hindustan Motors continues to buy locally or import its piston castings and machines the same to be exclusively used in the engine manufactured by it for the Ambassador car. On its present capacity for car production, the requirement of pistons has been placed at 40,000 per annum.

7.4. The sanctioned capacity of Escorts (Agents) Private Ltd., is 3 lakhs pistons on double shift and it is expected to cover the range of demand for original equipment as well as of replacement for engines of popular makes operating in the country. It expects to go into production before the end of 1960. Production of gudgeon pins is contemplated by the company whose factory will be located alongside the Goetze unit at Bahadurgarh near Patiala.

7.5. Hindustan Pistons Ltd., Madras, has a capacity for 18,000 pistons and 18,000 gudgeon pins. With the expanded capacity, the position of each of the units would be as follows :—

(In lakhs Nos.)

Name of the unit	Capacity on double shift		
	Pistons	Pins	Rings
India Pistons . . . . .	10·5	10·5	63·0
Goetze . . . . .	..	..	30·0
Escorts . . . . .	3·0	3·0	..
Hindustan Motors . . . . .	0·40	0·40	..
Hindustan Pistons . . . . .	0·18	0·18	..
<b>TOTAL</b>	<b>14·08</b>	<b>14·08</b>	<b>93·0</b>

7.6. Figures of production for the years 1957-59 were as follows :—

Name of the unit	नवायन निधि	Years		
		1957	1958	1959
<i>Pistons</i>				
1. India Pistons (P) Ltd. . . . .		178,702	193,725	246,582
2. Hindustan Motors Ltd. . . . .		18,546	13,585	21,631
3. Hindustan Pistons Ltd. . . . .		9,910	10,787	13,845
<b>TOTAL</b>		<b>207,158</b>	<b>218,097</b>	<b>282,058</b>
<i>Gudgeon Pins</i>				
1. India Pistons (P) Ltd. . . . .		159,879	172,522	240,452
2. Hindustan Motors Ltd. . . . .		18,546	13,585	21,631
3. Hindustan Pistons Ltd. . . . .		9,910	10,787	13,845
<b>TOTAL</b>		<b>188,335</b>	<b>196,894</b>	<b>275,928</b>

Name of the unit	Years		
	1957	1958	1959
<i>Piston Rings</i>			
(including chromium plated rings)			
1. India Pistons (P) Ltd. . . . .	1,758,553	2,062,809	2,653,929
2. Goetze (India) Pvt. Ltd. . . . .	22,529	1,227,999	2,116,301
<b>TOTAL . . .</b>	<b>1,781,082</b>	<b>3,290,808</b>	<b>4,770,230</b>
<i>Chromium Plated Piston Rings</i>			
1. India Pistons (P) Ltd. . . . .	.. ..	.. ..	6,890
2. Goetze (India) Pvt. Ltd. . . . .	12	127,202	207,594
<b>TOTAL . . .</b>	<b>12</b>	<b>127,202</b>	<b>214,484</b>

It was explained by Goetze representative that out of 4.27 lakhs rings produced in 1957 the quantity available for sale was negligible, as most of the trial production did not come up to standard.

7.7. As regards the small scale sector no reliable figures are available in regard to present capacity or production. Some figures of labour employed, capital invested and value of output sold have been given, but they are not useful to us to make any proper assessment of target capacity for production in these units. Judging by actual sales, limited capital investment, small employment of these units and lack of equipment for testing and precision measuring tools so as to ensure quality control, it would appear that the scope for production open to them would be limited. We have not, therefore, thought it necessary to take note of them for assessing the future capacity of the industry as a whole correlated to future demand.

8.1. In our last Report we estimated the demand in 1957 at 804,000 pistons, equal number of pins and 5,688,000 rings and expected the demand to increase at the rate of about **Domestic demand.** 20 per cent each year during the next three years.

Those estimates were made after taking into consideration the replacement requirements of different types of vehicles on the road in 1956 and the original equipment demand of vehicles produced in that year. Our estimates were exclusive of the Defence Service requirements.

8.2. The Development Wing has estimated the current demand for pistons at 1.03 million and for rings at 7.2 millions and expects  
2-T. C. Bom/60.

the demand to increase at the rate of 20 per cent a year. Its estimate is not based on the latest information available in regard to the number of vehicles on the road.

8.3. The number of motor vehicles on the road as on 15th January 1960 reported to us by the Ministry of Transport was as follows :—

Private Motor cars . . . . .	213,327
Jeeps . . . . .	18,316
Motor cabs . . . . .	15,875
Motor cycles . . . . .	57,345
Auto rickshaws . . . . .	3,567
Other public service vehicles . . . . .	42,507
Goods vehicles . . . . .	137,749
Miscellaneous vehicles . . . . .	28,834
<b>TOTAL</b>	<b>517,520</b>

We have preferred to base our estimate of replacement requirements on the above figures. The *Ad Hoc Committee on Automobiles* has assessed the production of cars and jeeps and commercial vehicles respectively to rise in the Third Plan period from 20,000 to 32,000 respectively to 48,000 and 59,000. Note has been taken of this in computing original equipment requirements.

8.4. At the public inquiry the representatives of producers as well as other commented on the large divergence between the availability of the products, and the estimates of demand by the Commission in 1957. It was urged that not only was the estimate too high but a further increase in the demand during the next 5 years at the rate of 20 per cent per year would be unrealistic. Considering the age of the vehicles on the road and the production of new vehicles failing to keep up with the current demand, an elimination of 5 per cent per year approximating to 26,000 units would not be unjustified. In the case of diesel engines the evidence given before us was that while many factors including proper maintenance would regulate and lengthen the life of fast moving parts like pistons, mileage would offer a more dependable basis for estimating replacement than a specific period of time. A big fleet owner from the South estimates frequency of replacement of pistons for diesels at 80,000 miles and 2 years. The Bombay State Transport puts the mileage lower and the time period higher. In the case of diesel engines it will be reasonable to assume replacement of pistons once in 3 years when assumed mileage would be covered by commercial vehicles rather than once in 4 years as previously assumed. The Automobile Manufacturers' Association suggested a similar 3 years limit for petrol driven commercial vehicles, with which we agree. For the rest no change in the basis of calculation previously adopted by us is made except to keep down the annual increases to 10 per cent.

8.5. On the above basis the replacement demand works out as follows :—

(a) Private motor cars, motor cabs and jeeps 247,518 at 5 cylinders per vehicle once in 5 years . . . . .	247,518
(b) 209,090 other public service vehicles, goods vehicles, miscellaneous vehicles at 6 cylinders once in 3 years . . . . .	418,180
(c) 60,912 motor cycles and auto-rickshaws at one cylinder once in 3 years . . . . .	20,304
(d) 37,500 tractors at 4 cylinders once in 5 years . . . . .	30,000
(e) 300,000 stationary engines at one cylinder once in 5 years . . . . .	60,000
<b>TOTAL</b>	<b>776,000</b>

8.6. The position relating to original equipment is as follows :—

*Passenger cars*

Hindustan . . . . .	10,000
Fiat . . . . .	6,500
Standard 10 . . . . .	3,000
Mahindra's Jeeps . . . . .	5,500
	<hr/>
	25,000
Total at 4 cylinders per vehicle . . . . .	<hr/> 100,000

*Commercial vehicles*

Automobile products' Meadows engines . . . . .	3,000
Simpsons'—Perkins . . . . .	8,500
Telco . . . . .	9,600
Leyland . . . . .	2,000
Other petrol trucks . . . . .	3,000
	<hr/> 26,100
Total at 6 cylinders per engine . . . . .	<hr/> 156,600
Stationary engines at 1 cylinder . . . . .	<hr/> 40,000
Motor cycles, auto-rickshaws, scooters, etc. 18,000 at 1 cylinder . . . . .	<hr/> 18,000

The total current demand, therefore, works out to as follows :—

	Pistons	Gudgeon Pins
Original equipment . . . . .	314,600	314,600
Replacement . . . . .	776,000	776,000
<b>TOTAL</b>	<b>1,090,600</b>	<b>1,090,600</b>

As regards piston rings, the number required for original equipment is four for each piston and twice the number for replacement, as occasions for replacements of rings will be twice as many as pistons. On this basis the demand for rings would be 7·5 millions. For future demand, we agree that there would be an approximate increase of 10 per cent per year in the total requirement.

9.1. Aluminium alloy for pistons, special steel for gudgeon pins and expander rings and pig iron are the principal raw materials required by manufacturers of piston assemblies.

**Raw materials.** Since our last report in 1957, India Pistons has established an aluminium foundry with a capacity of 3 lakh piston castings on single shift basis which should be adequate to meet its present and future requirements. Certain manufacturers like Telco prefer forgings to castings for their engines and necessary equipment for it is proposed to be installed by India Pistons and Escorts. India Pistons uses aluminium alloy (LM 13) for its castings. Its present requirement of aluminium alloy is about 25 tons a month which would be doubled when its expansion is completed. Till the middle of 1959 its requirements were met partly by imports and partly from indigenous sources.

9.2. Aluminium Corporation of India Ltd., which supplied aluminium alloy to India Piston till recently has informed us as well as the Company that as it has been facing extreme shortage of aluminium metal it would not be in a position to make aluminium alloy. It has requested that it should be permitted to import virgin metal for this purpose along with the alloy metals such as nickel, silicon, magnesium and copper, so that the necessary tonnage may be regularly supplied to the piston manufacturers. We however consider that a protected industry should endeavour to help another protected industry by supply of raw materials within its means, as otherwise the whole scheme of protection which requires an integrated approach in regard to import of raw materials and supply of finished products would be disturbed and an extra burden may be cast on the consumer at large. The indigenous aluminium industry, if it could not augment its supply of aluminium alloy ingots, should not at least reduce the supplies to piston manufacturers below the existing levels. Even if the import price of L.M.-13 alloy is at present about Rs. 800 per ton cheaper than the indigenous product, in the overall interest of the economy the production of this raw material indigenously is desirable.

9.3. Special steel for the manufacture of gudgeon pins and expander rings is not available indigenously and the whole of the requirements have to be imported by piston manufacturers. About pig iron which is available from indigenous sources, both the leading manufacturers have complained that supplies were neither consistent nor regular, whether allocation was made from a plant in the public sector or from the private sector. There seems to be delay in receiving allocations from the Iron and Steel Controller and further delay in the fulfilment of the orders placed on pig iron producers. The quality of pig iron also is stated to be not of the grade or specifications required, phosphorous, silicon, manganese or carbon content being often excessive. To obtain pig iron of requisite grade on which the performance of the ring depends, the manufacturers have to proceed by trial and error, resulting in wastage both at the foundry casting stage as well as in the finishing stage. We understand that the supply position of pig iron will not be difficult any longer. The only difficulty that is likely

to persist will be in regard to quality. We recommend that the Development Wing should ascertain from piston manufacturers the specifications and quantity of pig iron required by them and should arrange with the Iron and Steel Controller to plan the requirements of the industry and place allocations with those producers who can make pig iron according to the specifications of the piston manufacturers.

9.4. High speed and alloy tools, gauges, testing apparatus, etc., have also to be imported by piston manufacturers who are at present having adequate import facilities for this purpose. On the whole, for this ancillary industry the principal raw materials to the extent of over 70 per cent are available from indigenous sources.

10.1. Satisfaction about the quality of pistons, gudgeon pins and rings produced by India Pistons was expressed to the Commission when it reported in 1957. Nevertheless, in the

**Quality of the indigenous product.** light of certain complaints received, we had recommended that the Company should tighten

up its inspection procedure and see that no room for complaints existed. In connection with the present inquiry, the Development Wing has stated that the quality of the products of the India Pistons is satisfactory. There have been no complaints about the quality of the products supplied to the Defence Department through D. G. S. & D. The recent tests made by the Indian Institute of Science, Bangalore also confirm that the quality and performance of the indigenous piston assembly compared favourably with that of the imported product. As already stated in paragraph 5.3 India Pistons has instituted an inspection system at all stages of manufacture and has adequate facilities for testing of raw materials and finished products. Nevertheless complaints were received from engine manufacturers as well as from other consumers, some of whom admittedly have not been using indigenous products or have continued to import through their associates. General complaints were about the finish, greater wear leading to oiling up, poor compression, low mileage, heavy rejections due to defective fit, weight being not within the specified tolerance, excessive taper on the skirt of the piston and ovality of the piston pin bores.

10.2. These complaints were discussed at the public inquiry. One automobile manufacturer who exclusively uses India Pistons products has stated that the concern has been very co-operative in trying to eliminate the defects pointed out. In fact, regarding the original equipment, the Company has come to an agreement to take back all rejects even before investigation of the claim from the automobile manufacturer, and inflate the running order with them to the extent of rejection. The complaint of another manufacturer about the performance of pistons and pins has also been satisfactorily met by the adoption of selective fittings of sets supplied. India Pistons expects that, with the steps that it is taking to improve quality control, there would be no ground for complaint about quality in future.

10.3. Goetze (India) Private Ltd., has also stated that at several stages of production there is inspection both in regard to quality and dimensional accuracies and that it has necessary equipment for testing

of raw materials and finished product. The consumers are satisfied with the quality of its products. Automobile manufacturers have also accepted its products as satisfactory.

10.4. There were, however, complaints about delay in delivery of piston assembly not so much from automobile manufacturers but from stationary engine manufacturers and agricultural engine producers. When we enquired into the matter, we found that piston manufacturers were ready to supply an alternative to a patented part while the tractor people wanted a specification which could not be for that reason complied with. Other contributory factors were lack of planning in placing orders by indentors as well as manufacturers' difficulties in regard to raw materials, particularly their quality. We have on the whole found that the users are generally satisfied about the quality and performance of piston assemblies including components manufactured in the country. We are satisfied that the manufacturers are trying to rationalise their production so as to increase the output, bring down costs and have adequate stocks with themselves or with dealers to meet the demand for replacement as well as for original equipment when required.

11.1. The import policy relating to piston assembly and its components is set out in the List III of Appendix XXVI of the Import Trade Control Policy (Red Book) issued from time to time. The policy in respect of the items under reference since October 1957 is given item-wise in Appendix IV.

11.2. A statement is given below showing imports of piston assemblies, pistons, piston rings and gudgeon pins from 1957 to 1959.

	1957		1958		1959	
	Quantity (Nos.)	Value (Rs.)	Quantity (Nos.)	Value (Rs.)	Quantity (Nos.)	Value (Rs.)
Piston Assemblies .	77,524	13,58,957	1,00,675	24,13,206	1,92,231	37,00,701
Pistons . .	67,315	11,23,465	45,236	10,92,861	90,363	15,70,206
Pistons Rings .	275,837	9,36,325	2,43,518	6,84,588	2,54,829	8,13,992
Gudgeon Pins .	16,750	95,610	27,820	1,02,268	2,01,511	5,04,903

11.3. About the import policy and its effects on the protected industry one producer has drawn our attention to (a) misuse of licences for importation of aluminium pistons instead of cast iron types for which 100 per cent quota is allowed, (b) importation of piston rings with pistons and pins where interchangeable with popular aluminium alloy pistons, which adversely affect the demand for piston rings of popular types indigenously manufactured and (c) the drain on foreign exchange involved in the above unnecessary importation. In view of the declining demand for cast iron pistons and the fact that the industry within the country could supply pistons within the protected range the issue of large quotas for imports of this type was stated to be redundant. The other manufacturer had also stated that "considering the high cost of production on limited volume and import of the very makes, types and sizes of rings produced in the country, second to none

in quality, separately and with pistons and engines in c.k.d. condition, neither the protective duty imposed, nor the so-called restricted imports has helped the industry to any appreciable extent. Foreign competition still exists. Manufacturers, assemblers, the trade and large consumers are taking full advantage of not only the lower prices offered by overseas suppliers but also import large quantities of the rings for the most popular makes that are in big demand within restricted quota licences although the very types are produced in the country in abundance. The industry can develop fast only if import of types and sizes produced in the country is completely banned; otherwise it will be crippled in no time". These representations were again pressed at the inquiry.

11.4. There seems to be some force in the contention of the manufacturers as it would appear that the volume and value of imports of pistons and rings have been steadily rising as from 1957 and the policy was liberalised in 1959. In the absence of separate figures of import according to types it has not been possible for us to check up whether categories freely available in the country are being imported instead of types not manufactured in the country. There is, however, a likelihood that both for original equipment and more so for replacement parts pistons and rings which are popular types and are manufactured in the country were being imported under the liberal licensing policy. Perhaps this facility was granted when the trade had represented about shortage in the market. This situation no longer obtains and, therefore, it need not be continued. We would like to add, that the industry is now able to produce articles upto the standard required and would soon be in a position to meet the indigenous requirements in full.

11.5. Though at present no worthwhile exports are taking place of piston assemblies and other components, the fact that the two large units in the industry are functioning with foreign technical collaboration and a third one is to go into production shortly and their products are comparable with those produced by their overseas collaborators would warrant the expectation that an export market could be built up to begin with at least in neighbouring countries. India Pistons has informed us that its present capacity is not sufficient to meet domestic demand and according to its present technical collaboration agreement it is precluded from exporting its products. But it has agreed that with the expansion of its capacity it would start negotiations with its associates for a revision of the agreement so as to allow it to export to foreign countries.

11.6. Goetze has stated that due to its present high cost of production on limited volume it is unable to compete with the products from the U.K. and the U.S.A. It has, however, expressed confidence that with an increase in the volume of production when it becomes economical, there would be a possibility of export. We have drawn attention to this aspect of the matter only to emphasise that the manufacturers should spare no efforts to increase production so that costs can be brought down. Some of the collaboration agreements contain terms which might be regarded as restricting the scope for exports. We suggest that such units should take steps to get the restrictive provisions

suitably modified in their own interests as well as for the development of the export trade.

12. Under Item 75(12A) of the First Schedule to the Indian Tariff Act, 1934 the rates of customs duty applicable to the protected categories of piston assemblies and components thereof are as given below:—

Sl. No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The U.K.	A British Colony	Burma	
75(12A)	The following articles adapted for use as parts and accessories of internal combustion engines of all kinds but excluding such articles as are adapted for use exclusively as parts and accessories of internal combustion engines of agricultural tractors and aeroplanes namely:—	Protective.	50 per cent <i>ad valorem.</i>	..	..	..	• Decr. 31st, 1960.
	Trunk piston assembly of diameter 6 inches and below, trunk pistons of diameter 6 inches and below, trunk piston rings (excluding chromium plated rings) of diameter 6 inches and below and gudgeon pins for trunk pistons of diameter 6 inches and below.						

Under Government of India, Ministry of Finance (Revenue Division) Notification No. 198-Customs, dated the 24th December 1955, articles falling under this Item, if of the United Kingdom manufacture, are exempt from payment of so much of the customs duty leviable thereon as is in excess of 42  $\frac{1}{2}\%$  *c d valorem.*

Provided that the said articles are adapted for use exclusively as parts and accessories of motor vehicles other than motor cars including taxi cabs.

13.1. In Appendix V we have given information regarding c.i.f. prices and landed costs as obtained from the Collectors of Customs and importers. Most of the prices relate to imports from the U.K. Disparity is noticed in the

**C. i. f. prices and landed costs** prices paid for items imported from the same country about the same time as for example,

Perkins P-6 assemblies. This is perhaps due to either variations in the price as between small and large orders which are subject to heavier discount or between supplies made as original equipment and as spares. This difference between items imported as original equipment and as spares is also borne out by the following figures furnished to us by Premier Automobiles Ltd., in respect of piston assemblies. In fact this clarification removes the basis of the complaint that India Pistons products, which are sold at a uniform price for original equipment and replacement purposes, are costlier than imported items.

*Piston assemblies imported as spare parts*

Description	Ex-Factory	C.i.f.	Customs Duty	Clearing charges	Landed Costs
Dodge petrol engine piston assembly . . .	\$ 4.02 each	Rs. 21.16	10.67	0.56	Rs. 32.39
Fiat 1100 engine . . .	Lire 1058 each	Rs. 8.92	4.50	0.18	Rs. 13.60

*Pistons bare and piston assemblies imported as original equipment*

Description	Ex-Factory	Percent- age Cus- toms duty	Landed Costs
Dodge petrol engine piston bare . . .	£ 0.10.2 each	42½	Rs. 10.94
Fiat 1100 engine piston bare . . .	£ 0.5.5½ each	50	5.53
Dodge petrol engine piston assembly . . .	£ 0.16.8½ each	(without circlips)	17.19 0.06 add for circlips
			17.25 each
Fiat 1100 engine piston assembly . . .	£ 0.8.7½ each	50	8.45 each

Piston assembly means piston with gudgeon pin, circlips and piston rings.

13.2. In regard to comparison of costs with c.i.f. prices our attention has been drawn to the fact that large number of Japanese pins (Perkins) were imported at less than Rs. 1.25 landed cost as against the landed cost of Rs. 5.5 for Hepolite pins. Further, it was stated that disposal goods are available regularly for Dodge engine, Jeep, etc.,

at a low price and it was explained that even Perkins pistons were imported at sh. 6 c.i.f. when obtained from disposals as against the real c.i.f. price of Rs. 28·11. In this context the India Pistons has urged that unless the present duty of 50 per cent *ad valorem* is continued to give adequate protection from cheap imports, consolidation of the industry will become difficult.

14.1. Our Cost Accounts Officer has examined the cost of certain categories of protected products manufactured by India Pistons Ltd.,

**Cost of production  
and fair ex-works  
prices**

Madras. The Company has a system of departmental costing from which for our purpose the Cost Accounts Officer had worked out the cost for each line of product. The report of the Cost Accounts Officer has been sent as a separate confidential enclosure to this report.

14.2. The company has two foundries one for aluminium alloy castings and one for iron castings of piston rings, liners etc. Seven popular types which constitute about 50 per cent of the total output in number were taken up for costing by our Cost Accounts Officer. Those are Perkins 3·501", Fiat 66 m.m., Dodge 3·7/16", Willys Jeep 3 $\frac{1}{8}$ ", Royal Enfield 2·751", Standard 10·63 m.m., and Ruston and Hornsby 4 $\frac{1}{2}$ ". Detailed investigation of costs was undertaken for the year 1958-59.

14.3. During the period though sections of the factory worked double shift the output of pistons, piston rings and gudgeon pins was short of the single shift capacity. It was explained that the number would be relatively lower when large size pistons are manufactured while the converse would be the case when smaller sizes are manufactured. In the foundry it was noticed that in comparison with centrifugal casting from which rings are later cut out the cost of single casting was excessively high. The heavy incidence of loss particularly with regard to risers and runners where the percentage has gone up since our last report, indicates the need for better control in the factory over utilisation of material right from the foundry stage. That would produce scrap which materially varies between types of piston and according to the number of operations to be gone through, and thus would bring down the cost. The production attained by the company in 1958-59 which runs close to that estimated by the Commission during the last inquiry, was—

	Lakhs
Pistons . . . . .	2·08
Gudgeon pins . . . . .	1·94
Cast iron rings . . . . .	20·26
Duaflex rings . . . . .	1·98

The common types in the last costing and the present costing are only three, viz., Royal Enfield 2·751", Perkins 3·501" and Ruston and Hornsby 4 $\frac{1}{2}$ ". For each of these piston assemblies the cost increase ranged between 7 and 17 per cent due mainly to rise in material cost, as well as in conversion charges owing to increased incidence of labour cost including dearness allowance. Increase in net material cost is mainly for gudgeon pins and rings. Indigenous aluminium alloy ingots

cost the company Rs. 2·15 per lb. as against Rs. 1·74 for imported. The consumption of imported and indigenous aluminium alloy ingot during the costed period was in the ratio of 1 : 1. Though the company pressed for inclusion in the cost, bonus paid to labour and staff, interest, development rebate and commission on profit paid to the General Manager and his deputy and the expenses pertaining to the selling organisation, we have, in accordance with our usual practice excluded them. The ex-factory cost of the selected types as worked out by our Cost Accounts Officer is given below :

	Bore size	Ex-factory cost
		Rs.
<i>Piston Assembly :</i>		
1. Perkins	3·501"	17·438
2. Fiat 1100	68 mm.	9·673
3. Dodge	3 7/16"	18·023
4. Willys Jeep	3 1/8"	13·307
5. Royal Enfield	2·751"	11·527
6. Standard 10	63 mm.	8·661
7. Ruston & Hornsby	4 1/2"	40·143
<i>Piston Rings :</i>		
1. Perkins		Ex-factory cost
(i) Compression 3/32" width		0·357
(ii) Oil Control 1/4" width		0·786
(iii) Maxigroove oil ring 1/2" width		0·783
(iv) Laminated compression 18" width		0·434
2. Fiat 1100		
(i) Compression 2·5 mm. width		0·419
(ii) Napier scraper compression 2·5 mm. width		0·442
(iii) Oil control 3·5 mm. width		0·652
(iv) Duaflex oil control 5/32" width		0·445
3. Dodge		
(i) Compression 3/32" width		0·544
(ii) Internally stepped compression 3/32" width		0·746
(iii) Oil control 5/32"		1·285
4. Willys Jeep		
(i) Compression 3/32" width		0·531
(ii) Internally stepped compression 3/32" width		0·654
(iii) Oil control 3/16" width		0·988
5. Royal Enfield		
(i) Compression 1/16" width		0·440
(ii) Oil control 5/32" width		0·701
6. Standard 10		
(i) Compression 2 mm. width		0·298
(ii) Oil control 5/32" width		0·718
7. Ruston Hornsby		
(i) Compression 1/8" width		0·482
(ii) Oil control 1/8" width		0·798

	Ex-factory cost
	Rs.
<i>Gudgeon Pins :</i>	
1. Perkins . . . . .	3.123
2. Fiat 1100 . . . . .	1.517
3. Dodge . . . . .	1.941
4. Willys Jeep . . . . .	1.643
5. Royal Enfield . . . . .	1.639
6. Standard 10 . . . . .	1.251
7. Ruston Hornsby . . . . .	6.767

14.4. *Estimates for the future.*—As the expansion of the plant would be completed and the capacity doubled by the end of current year we have assumed production for the next three years at an average of—

	Lakhs
Pistons . . . . .	5
Cast iron rings . . . . .	50
Duaflex rings . . . . .	5
Gudgeon pins . . . . .	5

Increase in the cost of pig iron and aluminium due to incidence of recent excise duties of Rs. 10 and Rs. 300 per ton, respectively thereon has been taken note of. The consumption of imported and indigenous aluminium alloy ingot has been assumed to continue in the same ratio as in the costed period. Direct labour charges for the larger production have been allowed only at 50 per cent of the 1958-59 level, as semi-automatic machinery will be installed under the expansion scheme. Allowance has been made for rise in power cost by about 30 per cent. An increase of 50 per cent over the actual costs of 1958-59 has been allowed in each of the items of costs under repairs and maintenance, establishment and other overheads. The increases allowed under establishment and other overheads cover the expenses for the company's new schemes of product development and design and training overseas. Depreciation has been allowed on the basis of two shift working at normal income-tax rates. Depreciation on account of increase in capital expenditure to the extent of Rs. 52 lakhs incurred on the new plant and machinery has also been provided. Adjustments for scrap percentage have been made on the basis that the present high incidence in foundry cost would be reduced. Return is allowed at 10 per cent on the capital employed inclusive of the element of working capital estimated at four months' cost of production. The Company has not made any change in prices since 1957. Having regard to the dividends paid in the past and the desirability of keeping the price to the consumer reasonable, to which the company also agrees we consider 10 per cent return should be fair to the industry.

cost the company Rs. 2·15 per lb. as against Rs. 1·74 for imported. The consumption of imported and indigenous aluminium alloy ingot during the costed period was in the ratio of 1 : 1. Though the company pressed for inclusion in the cost, bonus paid to labour and staff, interest, development rebate and commission on profit paid to the General Manager and his deputy and the expenses pertaining to the selling organisation, we have, in accordance with our usual practice excluded them. The ex-factory cost of the selected types as worked out by our Cost Accounts Officer is given below :

	Bore size	Ex-factory cost
		Rs.
<i>Piston Assembly :</i>		
1. Perkins	3·501"	17·438
2. Fiat 1100	68 mm.	9·673
3. Dodge	3 7/16"	18·023
4. Willys Jeep	3 1/8"	13·307
5. Royal Enfield	2·751"	11·527
6. Standard 10	63 mm.	8·661
7. Ruston & Hornsby	4 1/2"	40·143

	Ex-factory cost
	Rs.
<i>Piston Rings :</i>	
1. <i>Perkins</i>	
(i) Compression 3/32" width	0·357
(ii) Oil Control 1/4" width	0·786
(iii) Maxigroove oil ring 1/2" width	0·783
(iv) Laminated compression 18" width	0·434
2. <i>Fiat 1100</i>	
(i) Compression 2·5 mm. width	0·419
(ii) Napier scraper compression 2·5 mm. width	0·442
(iii) Oil control 3·5 mm. width	0·652
(iv) Duaflex oil control 5/32" width	0·445
3. <i>Dodge</i>	
(i) Compression 3/32" width	0·544
(ii) Internally stepped compression 3/32" width	0·746
(iii) Oil control 5/32"	1·285
4. <i>Willy's Jeep</i>	
(i) Compression 3/32" width	0·531
(ii) Internally stepped compression 3/32" width	0·654
(iii) Oil control 3/16" width	0·988
5. <i>Royal Enfield</i>	
(i) Compression 1/16" width	0·440
(ii) Oil control 5/32" width	0·701
6. <i>Standard 10</i>	
(i) Compression 2 mm. width	0·298
(ii) Oil control 5/32" width	0·718
7. <i>Ruston Hornsby</i>	
(i) Compression 1/8" width	0·482
(ii) Oil control 1/8" width	0·798

15. We give below statements comparing fair ex-works prices of indigenous piston assemblies and piston rings with the c.i.f. and landed cost ex-duty of the imported products, c.i.f. prices being selected from the statement given in paragraph 13 and Appendix V.

**Comparison of fair ex-works prices with c. i. f. prices and landed costs (ex-duty) of imported products**

	Perkins P-6 3.501*	Fiat	Dodge	Standard Ten	Willys Jeep
<b>I—Piston Assembly :</b>	Rs.	Rs.	Rs.	Rs.	Rs.
(i) C.i.f. price . . . . .	22.40	7.29	17.19	8.43	9.74*
(ii) Clearing charges . . . . .	0.66	0.25	0.56	0.12	0.24
(iii) Landed cost ex-duty . . . . .	23.06	7.54	17.75	8.55	9.98
(iv) Fair ex-works price . . . . .	17.355	9.108	16.808	7.973	12.419
(v) Difference of (iv)—(iii) . . . . .	—5.71	1.568	—0.94	—0.58	2.44
(vi) Difference as %age of (i) . . . . .	—25.49	21.51	—5.47	—6.88	25.05

\*Estimated on the basis of a landed cost of Rs. 14.85.

	Perkins set of 24 rings (Rs.)
<b>II—Rings:</b>	

(i) C.i.f. price . . . . .	18.00
(ii) Clearing charges . . . . .	1.00
(iii) Landed cost ex-duty . . . . .	19.00
(iv) Fair ex-works price . . . . .	15.492
(v) Difference of (iv)—(iii) . . . . .	—3.508
(vi) The above difference as %age to (i) . . . . .	—19.49

16. Owing to deficiency in the data available and absence of imports of comparable type in recent months due to import restrictions it is difficult to compare the fair ex-works cost of indigenous piston assemblies including components with the like imported products. But certain trends will be clear. The quality of the indigenous products has definitely improved under protection. Removal of import restrictions is likely to affect the domestic industry adversely in the context of the facts that (a) prices of

**Measure of protection**

imports from Germany or Japan are apt to be lower, (b) that heavy discounts are allowed on large size imports, and (c) that the flow of low priced disposal items is likely to continue. There is also a large measure of consumer preference for the imported product. The industry has not yet become fully established. The industry also labours under the handicap of relatively higher cost of indigenous aluminium alloy and other raw materials. There is also absence of willing co-operation from automobile manufacturers with the result that the effective integration of the production of this ancillary industry with that of the main automobile industry is yet to be established. Of the five costed items, three have a fair margin *vis-a-vis* c.i.f. import prices. In the case of the other two which represent a good share of the total output a duty of not less than 25 per cent will be required. Although *prima facie* on the basis of our costing it would appear that already in the case of certain items the fair ex-works price compares favourably with the c.i.f. price and might justify reducing the rate of duty or withdrawal of protection, we do not recommend either course. The industry has at present enjoyed protection for about 5 years and by its performance has justified the grant of protection. It has taken steps to expand and diversify its output and with increased production is likely to confirm the trend already evident of its products being able to face competition with similar imported articles. But without further continuance of protection the progress of developing indigenous designs will be seriously hampered. Manufacture of piston assemblies and components is an important automobile ancillary industry and its development requires a close watch, so long as the main industry stands in need of protection. The two main producers have expressed to us their confidence that the industry will be in a position to develop sufficiently within the next five years and carry on thereafter without protection. In the light of our assessment of the case, we recommend that protection should be continued to the industry at the existing rates of duty, i.e., 50 per cent *ad valorem standard* and the preferential rate of duty where applicable in accordance with Indo-U.K. Trade Agreement for a further period of three years ending 31st December 1963 when the development of this ancillary industry as well as the progress of the automobile manufacturing industry may warrant a further review. We also recommend that in order to implement our recommendation (*vide para 4.3 supra*) that chromium plated rings should also come within the scope of protection, item 75(12-A) of the First Schedule to the Indian Tariff Act, 1934 should be suitably modified by deleting the words in bracket "(excluding chromium plated rings)" in the column for description of article.

17.1. India Pistons has advised us that dealers net prices and consumers retail prices have been progressively reduced since 1953 and after 1957 no increases have been effected. It avers that it is a practice with the manufacturers in the U.S.A., U.K. and the Continent to supply original equipment at a concessional price, which is compensated for by a higher replacement price. It has in contrast followed the policy of supplying pistons both as original equipment and for replacement at the same price in the formative period although in many lines the volume of sales for replacement has not gone up. As an instance

**Sales and pricing policy**

it has mentioned that its nett prices and the landed costs of original equipment and spares for similar makes compare as follows :—

Type	India Pistons Nett pri- ces	O.E. landed	cost as
		Assem- bly	Spares
Leyland Mark-II	46·00	50·89	60·13
Mercedes Benz	70·35	..	131·00
Meadows	50·00	47·39	62·60
Dodge	18·00	14·29	21·70
Willys Jeep	16·60	14·83	22·75

It has also stated that despite increase in costs of raw material since 1958 of aluminium ingots to the extent of 17½ per cent, steel 13 per cent, diesel oil 23 per cent, pig iron 5 per cent and of wages 17 per cent., it has not raised consumer prices and the company has itself absorbed increased cost to the extent of Rs. 3·33 lakhs annually. It claims to have rationalised the production programme confining it only to about 40 models as against 140 originally manufactured. But despite this only for one item, viz. Perkins the volume of demand exceeds 4,000 per month and only in the case of Willys Jeep it touches the 1,000 piston mark per month. It has also claimed to have voluntarily effected reduction in the price of pistons for Petters engine manufactured by Kirloskar. The dividend paid by the company has not exceeded 6 per cent from 1951 to 1958 and during this period in certain years due to poor trading results no dividend had been declared. Though 12 per cent dividend was declared in 1959 on the basis of better working results, over a 9 year period since the Company had been in production the return to shareholders did not even amount to 4 per cent. As regards future pricing also it has assured us that job costing has been implemented for each quarter and as volume of demand for individual items goes up the benefit of cost reduction will be passed on to the consumers.

17.2. The Company has also claimed that it has an extensive sales organisation backed by "on the spot after sales service". Technical Sales representatives of the company are said to be permanently located at all principal centres like Bombay, Calcutta, Delhi and Madras so as to be at the service of the customer within twentyfour hours notice in any part of India. Further, the claims of customers regarding the product supplied are directly dealt with without the intervention of distributors and dealers.

17.3. Goetze has reported that its products are sold either direct to engine manufacturers as in the case of original equipment or through sole selling agents who have been appointed for India, Burma, Nepal,

Ceylon and Indonesia. The sole selling agents are said to have a network of their dealers for supply to customers. It has admitted that it has no control over the dealers or over the prices charged to the consumer. We consider it necessary and would like to impress on the manufacturers in a protected industry the importance of having a proper distribution system so as to ensure that the output of the industry is sold at fair prices. Ready and proper after-sales service and settlement of claims in case of complaints are also essential.

18. Our conclusions and recommendations are summarised as under.  
**Summary of conclusions and recommendations**

1. It is reiterated that the domestic manufacturers of internal combustion engines of all types should finalise their arrangements for obtaining their requirements of piston assembly and components from indigenous sources. Further, the import policy should be so framed as not to retard the implementation of the above recommendation:

(Paragraph 5.5)

2. After the completion of the sanctioned expansions by the end of 1960, the total capacity of the industry for pistons and gudgeon pins would be 1·4 millions and for rings 9·30 millions on double shift.

(Paragraph 7.5)

3. The total current domestic demand exclusive of the requirements of Defence Services is estimated at 1·09 millions a year for pistons and gudgeon pins and 7·5 millions a year for piston rings. The future demand is expected to increase at about 10 per cent a year.

(Paragraph 8.6)

4. The indigenous aluminium industry, if it could not augment its supply of aluminium alloy ingots, should not at least reduce the supplies to piston manufacturers below the existing levels.

(Paragraph 9.2)

5. The Development Wing should ascertain from piston manufacturers the specifications and quality of pig iron required by them and should arrange with the Iron & Steel Controller to plan the requirements of the industry and place allocations with those producers who can make pig iron according to the specifications of the piston manufacturers.

(Paragraph 9.3)

6. The users are generally satisfied with the quality and performance of piston assemblies including components manufactured in the country.

(Paragraph 10.4)

7. The units who have entered into foreign collaboration should take steps to get the restrictive provisions regarding exports suitably modified in their own interests as well as for the development of the export trade.

(Paragraph 11.6)

8. Protection to the piston assembly industry should be continued at the existing rates of duty for a further period of three years ending 31st December 1963. Chromium plated rings should also be brought within the scheme of protection and the Item 75(12-A) of the first schedule to the Indian Tariff Act, 1934 should be modified as indicated in paragraph 16.

(Paragraph 16)

19. We wish to thank the manufacturers, importers and consumers  
**Acknowledgements** for furnishing us with valuable information in connection with this inquiry.

K. R. P. AIYANGAR,  
*Chairman.*

S. K. MURANJAN,  
*Member.*

J. N. DUTTA,  
*Member.*

R. S. BHATT,  
*Member.*

**RAMA VARMA,**  
*Secretary.*

BOMBAY,

Dated 26th May, 1960.



## APPENDIX I

(*Vide Paragraph 3.1*)

*List of firms and bodies to whom the Commission's questionnaires/letters were issued and from whom replies or memoranda were received*

\*Indicates those who replied or sent their memoranda.

\*\*Indicates not interested.

### A. Producers

- \*1. India Pistons (Private) Ltd., Huzur Gardens, Sambium, Madras-1.
- \*2. Goetze (India) Private Ltd., N. & G. Bank Building, Cannaught Circus, New Delhi.
- \*3. Hindustan Piston Private Ltd., Mount Road, Madras.
- \*4. Escorts Agents (Private) Ltd., Cannaught Circus, New Delhi.
- \*\*5. Hindustan Motors Ltd., 8, India Exchange Place, Calcutta-1.

### B. Consumers

- \*1. Cooper Engineering Ltd., Satara Rd., Bombay State.
- 2. Dandayuthapapi Foundry Ltd., Pappanaickenpalayam, Coimbatore.
- \*3. Indian Commercial Co. Ltd., 45-47, Apollo Street, P. O. Box No. 1621, Bombay-1.
- 4. Indian National Diesel Engine Co. Ltd., P-61, Circular Garden Reach Rd, Kidderpore, Calcutta-23.
- 5. Kulkoo Engineering Works Ltd., Ichalkaranji, Kolhapur (Distt.).
- \*6. Mazgaon Dock Ltd., Dockyard Road, Bombay-10.
- \*\*7. Oriental Engineering Works Ltd., Industrial Area, Yamunanagar, P. O. Jagadhri (Ambala Dt.).
- \*\*8. Pakco Engineering Private Ltd., P. O. Box No. 14, Kolhapur.
- \*9. Ruston & Hornsby India (Private) Ltd., 1, Forbes Street, P. O. Box 91, Fort, Bombay-1.
- \*\*10. Textool Co. Ltd., Post Box No. 221, Ganapathy P. O., Coimbatore.
- \*\*11. Premier Auto Electric Private Ltd., 69, Tardeo Rd., Bombay-7.
- \*\*12. Rambir Engineering & Mills Store Co., G. T. Rd., Ludhiana.
- \*13. The Zamindra Engineering Co., P. O. Box No. 7, Fazilka.
- 14. M. B. Maganlal & Co., Garedia Kuva Rd., Post Box No. 102, Rajkot.
- 15. Grand Motor Works & Co., Gondal Rd., Rajkot.
- 16. K. Trivadi & Co., Bombay Mutual Chambers, 19-21, Hamam St., Bombay-1.
- 17. Joshi Transport Co., Porbandar.
- 18. Machinery Sales Corporation 5, Tamarind House, Tamarind Lane, Fr<sup>t</sup>, Bombay.
- 19. Jayems Engineering Co., Warden House, Sir P. M. Rd., Bombay-1.
- \*20. Acme Manufacturing Co. Ltd., Antop Hill, Wadala, Bombay.
- 21. Enfield (India) Ltd., Thiruvottiyur, Madras.
- \*22. Massey Furguson (India) Ltd., Post Box No. 3, Bangalore.
- 23. Larsen & Tubro Ltd., I. C. House, Dougall Rd., Bombay-1.
- \*24. Kirloskar Oil Engines Ltd., Elphinston Rd., Kirkee, Poona.

- \*25. Automobile Products of India Ltd., Bhandup, Bombay.
- \*26. Simpson & Co. Ltd., Mount Rd., Madras.
- \*27. The Tata Locomotive & Engineering Co. Ltd., Bombay House, Bruce St., Bombay-1.
- \*28. Ashok-Leyland Ltd., 38, Mount Road, Madras-2.
- 29. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta.
- \*30. Premier Automobiles Ltd., Agra Road, Bombay.
- \*31. The Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.
- \*32. Mahindra & Mahindra Ltd., Gateway Building, Apollo Street, Fort, Bombay.
- 33. Bangalore Transport Services, Wilson Gardens, Bangalore-2.
- 34. Indra Motors, Kurali, Ambala Dt. (Punjab).
- 35. P. S. N. Motors Private Ltd., Trichur.
- 36. T. N. Venkatasubba Reddy & Co., Madanapalle.
- \*37. Southern Roadways Private Ltd., West Veli Street, Madurai.
- 38. Dy. Commissioner, Board of Revenue, Hirakud Land Organisation, Sambalpur.
- 39. B. E. S. T. Undertaking, Electric House, Colaba, Bombay-5.
- 40. The Commissioner, Bombay Municipal Corporation, Bombay.
- \*41. The Secretary, Bombay Port Trust, Ballard Estate, Bombay.
- 42. The Commissioners for the Port of Calcutta, 15, Strand Road, Calcutta.
- \*43. The Ahmedabad Municipal Transport Corporation, Ahmedabad.
- 44. M/s. Dewar's Garage (I) Private Ltd., 4, Council House Street, Calcutta-1.
- 45. The Bihar State Road Transport Corporation, P. O. B. V. College, Patna.
- 46. Director, State Transport Assam, Shillong.
- \*47. Controller of Stores, S. T. Central Stores, Bombay Central Bus Stand, Bellasis Road, Bombay-8.
- \*48. Director, Kerala State Transport, Trivandrum.
- 49. General Manager, Andhra Pradesh Road Transport, Murshirabad, Hyderabad.
- 50. Chief Administrative Officer, Directorate of Transportation, Government of W. Bengal, Nilgunge Road, 24 Parganas, West Bengal.
- \*51. Honorary Director, Madras State Transport Department, Mount Road, Madras-2.
- 52. General Manager, Punjab Roadways, Amritsar.
- 53. General Manager, Mysore Government Road Transport Department, Bangalore.
- 54. Manager, Rajya Transport, Patna-2.
- 55. Transport Manager, Poona Municipal Transport, Poona-2.
- \*56. Controller of Stores, North Eastern Railways, Gorakhpur.
- 57. Controller of Stores, Central Railways, Bombay.
- \*58. General Manager, Southern Railway, Perambur, Madras-23.
- 59. General Manager, Eastern Railway, Calcutta.
- \*60. General Manager, Northern Railway, New Delhi.
- \*61. General Manager, South Eastern Railway, Calcutta.
- \*62. Controller of Stores, Western Railway, Churchgate, Bombay.
- \*\*63. Chief Administrative Officer, Integral Coach Factory, Perambur, Madras.
- 64. General Manager, Chittaranjan Locomotive Works, Chittaranjan.
- \*65. Hind Equipment Corporation, 24-B, Hamam Street, Raja Bahadur Compound, Bombay.

- 66. Indian National Diesel Engine Co. Ltd., Hall and Anderson Building (1st Floor), Park Street, Calcutta-16.
- 67. M/s. Tractor and Equipment Corporation Ltd., Post Box No. 279, New Delhi.
- \*68. The Director General of Supplies and Disposals, Government of India, Shahjahan Road, New Delhi.
- 69. Secretary to the Government of India, Ministry of Defence, New Delhi.

**C. Consumers' Associations**

- 1. Automobile Manufacturers' Association of India, India Exchange, Calcutta.
- 2. Secretary, Engineering Association of India, India Exchange, Calcutta-1.
- 3. The Secretary, Association of Engine Manufacturers of India, C/o. Kirloskar Oil Engines Ltd., Kirkee, Poona-3.
- 4. Bombay Motor Merchants' Association, Sukhnagar, Sandhurst Bridge, Bombay-7.
- 5. Calcutta Motor Dealers' Association, P-6, Mission Row Extension, Calcutta.
- 6. All India Automobile & Ancillary Industries Association, Brabourne Stadium, 87, Veer Nariman Road, Bombay-1.
- \*7. Tractor Earthmoving & Construction Equipment Distributor's Ass. Ltd. C/o. The Bombay Chamber of Commerce, Mackinnon Mackenzie Building, Bombay-1.
- 8. Indian Road & Transport Development Association Ltd., 27, Bastion Road, Bombay-1.
- \*\*9. Association of Indian Automobile Manufacturers, C/o. Tata Locomotive & Engineering Co. Ltd., Army & Navy Building, Mahatma Gandhi Road, Bombay-1.

**D. Importers**

- \*1. Ashok Leyland Ltd., Bank of Mysore Building, N. S. C. Bose Road, Madras-1.
- \*\*2. Balmer Lawrie & Co. Ltd., 21, Netaji Subhas Road, P. O. Box No. 4, Calcutta-1.
- \*\*3. George Oakes Ltd., P. O. Box No. 499, Bombay-1.
- 4. Girdharilal & Co., Sandhurst Bridge, 403, Sukh Sagar (4th Floor), Bombay-7.
- \*\*5. Great Eastern Shipping Co. Ltd., 14, Jamshedji Tata/Road, Churchgate Reclamation, Bombay-1.
- \*6. Greaves Cotton & Co. Ltd., 1, Forbes Street, Post Box No. 91, Bombay-1.
- \*7. India, Motor Parts and Accessories Private Ltd., 1/155 Mount Road, Madras-2.
- \*\*8. Jessop & Co. Ltd., 63, Netaji Subhas Road, Calcutta.
- 9. J. N. Marshall & Co., Savoy Chambers, 5, Wallace Street, Fort, Bombay.
- \*10. K. B. Thaker & Co., P. O. Box 1136, Commerce House, 140, Medows Street, Bombay-1.
- \*11. Madras Auto Service Ltd., 37, Mount Road, Madras.
- \*\*12. Mahindra & Mahindra Ltd., Gateway Building, Apollo Bunder, Bombay-1.
- \*13. Martin Burn Ltd., 12, Mission Row, Calcutta-1.
- 14. Orient General Agencies, Hamilton Road, Kashmere Gate, Delhi.
- \*15. Parry & Co. Ltd., Post Box No. 12, Madras-1.
- 16. Pashabhai Patel & Co., Construction House, Ballard Estate, Bombay.
- 17. P. Rai and Co., 105, Appollo Street, Fort, Bombay.
- 18. Premier Automobiles Ltd., Agra Road, Kurla, Bombay.
- \*\*19. Rane (Madras) Ltd., 5, Patullos Road, Mount Road, Madras-2.

- \*20. Simpson & Co. Ltd., 202/203, Mount Road, Madras-2.
- 21. Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.
- 22. The Modern Automobiles, 4/17-A, Mount Road, Madras-2.
- \*23. T. V. Sundram Iyengar & Sons Private Ltd., T. V. S. Building, West Veli Street, Madurai.
- \*24. Voltas Ltd., Graham Road, Ballard Estate, Bombay.
- 25. Rameshchandra Jeshingbhai, 216, Commerce House, 140, Medows Street, Fort, Bombay.

**E. Aluminium Suppliers**

- \*1. Indian Aluminium Co. Ltd., 31, Chowringhee Road, Calcutta-16.
- \*2. Aluminium Corporation of India Ltd., 7, Council House Street, Calcutta-1.

**F. Government Departments/State Governments**

- \*1. The Collector of Customs, Bombay.
- \*2. The Collector of Customs, Calcutta.
- \*3. The Collector of Customs, Madras.
- \*4. The Collector of Customs, Cochin.
- \*5. The Senior Industrial Adviser, Development Wing, Ministry of Commerce and Industry, Udyog Bhavan, King Edward Road, New Delhi.
- \*6. The Consulting Engineer to the Govt. of India, Ministry of Transport and Communications, Jamnagar House, New Delhi.
- 7. The Chief Secretary to the Govt. of Assam, Shillong.
- 8. The Chief Secretary to the Govt. of U.P., Lucknow.
- 9. The Chief Secretary to the Govt. of Bihar, Patna.
- 10. The Chief Secretary to the Govt. of Orissa, Bhubaneshwar.
- 11. The Chief Secretary to the Govt. of Kerala, Trivandrum.
- \*12. The Chief Secretary to the Govt. of Punjab, Chandigarh.
- 13. The Chief Secretary to the Govt. of Andhra Pradesh, Hyderabad.
- \*14. The Chief Secretary to the Govt. of Madras, Madras.
- 15. The Chief Secretary to the Govt. of Madhya Pradesh, Bhopal.
- 16. The Chief Secretary to the Govt. of Rajasthan, Jaipur.
- 17. The Chief Secretary to the Govt. of Jammu & Kashmir, Srinagar.
- \*18. The Chief Secretary to the Govt. of Mysore, Bangalore.
- 19. The Chief Secretary to the Govt. of Bombay, Bombay.
- 20. The Chief Commissioner, Delhi State, Delhi.
- 21. The Chief Commissioner, Himachal Pradesh, Simla.
- \*22. The Chief Secretary to the Govt. of West Bengal, Calcutta.
- \*23. Development Commissioner, Small Scale Industries, Shahjahan Road, New Delhi.

## APPENDIX II

*(Vide Paragraph 3·4)*

*List of persons who attended the public inquiry*

**(A). Producers :**

1. Shri M. K. Raju . . . . .	{ Representing	India Pistons (P) Ltd., Huzur Gardens, Sambium, Madras-1.
2. Shri K. V. Ramamoorthi . . . . .		
3. Shri W. N. Kamath . . . . .		
4. Shri V. Srinivasan . . . . .		
5. Shri H. W. Bernhardt . . . . .	{ "	Goetze (India) P. Ltd., N. & G. Bank Building, Cannaught Circus, New Delhi.
6. Shri M. K. Swami . . . . .		and Escorts Limited, N. & G. Bank Building, Cannaught Circus, New Delhi.

**(B). Importers :**

7. Shri W. Newnes . . . . .	{	Voltas Ltd., Graham Road, Ballard Estate, Bombay-1.
8. Shri K. M. Thakar . . . . .	{	K. B. Thakar & Co., P.O. Box 1136, Commerce House, 140, Medows Street, Bombay-1.
9. Shri P. D. Patel . . . . .	{	Sigil (India) Services Private Ltd., 381, Dadabhoi N. Road, Bombay-1.
10. Shri R. J. Shah . . . . .	{	Honesty Trading Corpora- tion, Beaman Chambers, Medows Street, Bombay-1.
11. Shri P. J. Shah . . . . .	{	
12. Shri L. M. Shah . . . . .	{	

**(C). Consumers' Associations/Consumers :**

13. Shri P. G. Patel . . . . .	{	Bombay Motor Merchants' Association, Sukhsagar, Sandhurst Bridge, Bom- bay-7.
14. Shri J. P. Sheth . . . . .		
15. Shri P. D. Dixit . . . . .	{	Association of Engine Manufacturers' of India, C/o. Kirloskar Oil Engines Ltd., Kirkee, Poona-3.
16. Shri H. R. Aslot . . . . .	{	All India Automobile & Ancillary Industries Association, Brabourne Stadium, 87, Veer Nariman Road, Bom- bay-1.

17. Shri N. Balakrishnan . . . . .	Representing	Automobile Mfrs. Association of India, C/o. Tata Locomotive & Engineering Co. Ltd., Army & Navy Building, Mahatma Gandhi Road, Bombay-1.
18. Shri K. V. Narayananmurti . . . . .	"	Tractor Earthmoving & Construction Equipment Distributors' Association, C/o. The Bombay Chamber of Commerce, Mackinnon MacKenzie Building, Bombay-1.
19. Shri M. K. Mantri	}	"
20. Shri S. N. Shirodkar		
21. Shri S. Johns		
22. Shri Hirebet . . . . .		Bombay State Road Transport Corporation, Bombay Central Bus Stand, Bellasis Road, Bombay-8.
23. Shri. S. K. Shah . . . . .		Tata Locomotive & Engineering Co. Ltd., Bombay House, Bruce Street, Bombay-1.
24. Shri P. K. Palit . . . . .		Premier Automobiles Ltd., Agra Road, Kurla, Bombay.
25. Shri N. Ramamurthi . . . . .		Mahindra & Mahindra Ltd., Gateway Building, Apollo Street, Fort, Bombay.
26. Shri R. D. Pusalkar	}	"
27. Shri J. A. Rangel		
28. Shri Felix Vaz	}	"
29. Shri A. Gahtan		
30. Shri A. K. Banerjee . . . . .		Ashok-Leyland Ltd., 38, Mount Road, Madras-2.
Ruston & Hornsby India Private Ltd., 1, Forbes Street, P.O. Box. 91, Fort, Bombay-1.		
Larsen & Toubro Ltd., I. C. House, Dougal Road, Bombay-1.		
Automobile Products of India Ltd., Bhandup, Bombay.		
Development Wing, Ministry of Commerce and Industry, Udyog Bhavan, King Edward Road, New Delhi.		

(D) *Government Departments :*

31. Shri P. S. Rao . . . . .

32. Dr. S. L. Sharma . . .	Representing	Development Commissioner, Small Scale Industries, Shahjahan Road, New Delhi.
33. Shri Ramabrahman . . .	"	Collector of Customs, Bombay.
34. Shri A. B. Rao . . .	"	Indian Standards Insti- tution, Manak Bhavan, Mathura Road, New Delhi.
35. Shri G. S. Athavale . . .	"	Directorate General of Supplies & Disposals, Shahjahan Road, New Delhi.
36. Shri K. Ramachandran . . .	"	Ministry of Defence, New Delhi.
37. Shri R. Pereira . . .	"	Bombay Port Trust, Ballard Estate, Bom- bay-1.



### APPENDIX III

*(Vide Paragraph 6·5)*

*List of small scale manufacturers of pistons, piston rings and gudgeon pins furnished by the Development Commissioner, Small Scale Industries*

1. Sakum Engineering Works, 5140/4114, Kasabpura, Delhi.
2. Ideal Piston Manufacturing Co., Old Rohtak Road, Delhi.
3. B.A.R. Industries (P) Ltd., 24, Najafgarh Road, Delhi.
4. S. D. Nanda & Sons, Old Rohtak Road, Delhi.
5. Nav Bharat Engineering Co., Naya Bazar, Delhi-6.
6. Ghandanlya Bros., Pathwari, Agra.
7. V. R. Engineering Works, 67, Freeganj, Agra.
8. Anand Centrifugal Casting Works, Pathwari, Agra.
9. Agarwal Engineering Works, Freeganj, Agra.
10. Sharma Engineering Works, Gudri Mansoor Khan, Agra.
11. P. R. Multani Engineering Works, Gudri Mansoor Khan, Agra.
12. Jack Centrifugal Casting and Engineering Works, Agra.
13. Fani Engineering Works, 1930, City Station Road, Agra.
14. Demco Engineering Works, Ghatia Darai, Agra.
15. Krishna Engineering Works, Pathwari, Belanganj, Agra.
16. India Spares, Gudri Mansoor Khan, Agra.
17. Bhartiya Industrial Corporation, 909, Belanganj, Agra.
18. Sunrise Engineering Works, Gudri Mansoor Khan, Agra.
19. Jain Engineering Works, Partabpura, Agra.
20. Steel Gate Piston Rings Industries, Kutcheri Road, Agra.
21. U. P. Iron Foundry, Pathwari, Agra.
22. S. G. Sudrani Engineering Works, Gudri Mansoor Khan, Agra.
23. Ataul Engineering Works, Belanganj, Agra.
24. Universal Electrical Mechanical Engineering Works, Gudri Mansoor Khan, Agra.
25. Madan Engineering Works, City Station Road, Agra.
26. P. L. Engineering Works, Pathwari, Agra.
27. Espee Diesel Engineers, Kingsway, Secunderabad.
28. Asadulla & Sons, Mozamjahi Market Road, Hyderabad.
29. Raja Mechanical Works, 253 Gowlinguda Chaman, Hyderabad.
30. Hyderabad Engineering Corporation, Narayanguda, Hyderabad.
31. Krishnamurthy Workshop, 66, Mahatma Gandhi Road, Hyderabad.
32. Narasinga Rao Mechanical Works, Balaramanagar, Near Ranigunj, Secunderabad.
33. Seetarama Foundry, Municipal Office Road, Islampet Vijayawada.
34. Auto Pistons Manufacturing Co., Hukam Singh Road, Amritsar.

## APPENDIX IV

(*Vide Paragraph 11·1*)

### *Statement showing import control policy*

#### A. Piston Assemblies

*October 1957 to March 1958*

Established importers were granted 100% General and 100% Soft quota licences and not more than 33½% of these could be utilised for import of aluminium piston assemblies of 6" diameter and less. Further, within the face value restriction of 33½%, not more than 25% could be utilised for import of aluminium pistons (including other sizes) for certain models. Actual users' applications from garages for import of complete piston assemblies of certain makes of cars, trucks and scooters were considered *ad hoc* at ports. Not more than one set of complete piston assembly for any internal combustion engine was licensed to actual owner of the equipment at the ports provided not more than one licence was issued to each party during the period.

*April 1958 to September 1958*

The policy did not change during this period. In addition, applications from Government projects and State Transport Organisations for import of complete piston assemblies of vehicles against their actual users' licences were considered *ad hoc* with the exception of certain models. In addition, quota licences issued to established importers for import of spares of agricultural tractors [S. No.-74(iii)/V], spare parts of motor cycles and scooters and spares of earth-moving equipment [S. No. (5)(ii)(a)/v] were allowed to be endorsed for the import of complete piston assemblies other than those for certain types of engines (mentioned in Annexure 'A' of Appendix XXVI). Such endorsements were to be made only for the specified parts, indicating part number and the size and the respective quantities and were to be limited only to those equipments for which the applicant was the sole agent in India. Such permission was to be granted upto a value of Rs. 2,500 in each case but could be extended upto Rs. 4,000 in the case of Established Importers of spare parts of earth-moving equipment.

*October 1958 to March 1959*

Same policy as for the licensing period April 1958 to September 1958 was continued.

*April 1959 to September 1959*

The policy for this period was same as for the period October 1958 to March 1959, except that the percentage of face value of quota licences which could be utilised for imports of aluminium piston assemblies of 6" diameter and below was raised to 50 from 33½. Further, quota licences issued for spare parts of agricultural tractors and/or tractor drawn agricultural implements [Sl. No. 74 (iii)V] were made valid for imports of complete piston assemblies of any size except for certain models mentioned in Annexure 'A' to Appendix XXVI upto a ceiling of Rs. 2,500.

*October 1959 to March 1960*

The policy continued to be same as for the licensing period April 1959 to September 1959. Besides, piston pins and bushings whether made of aluminium or cast iron as parts of aluminium piston assemblies of 6" diameter and below (excluding banned type) could only be imported within the face value restrictions for aluminium piston assemblies. However, piston pins and bushings irrespective of their size or metal of which they are made, when imported as parts fitted to piston assemblies of permissible type, which was not subject to face value restrictions were allowed

clearance without any face value restrictions. Further, quota licences issued for spare parts of agricultural tractors and/or tractor drawn agricultural implements were made valid for imports of complete piston assemblies of any size except for certain restricted models upto a ceiling of Rs. 3,000 as against Rs. 2,500 during the previous licensing period.

*April 1960 to September 1960*

Established importers are to be granted 100% General and 100% Soft licences but not more than 40% of the face value can be utilised for import of aluminium piston assemblies of 6" dia. and less. Out of this limit of 40% only 25% of it can be used for import of piston assemblies for restricted models. The other provisions of the policy remained same as for the previous licensing period except that the quota licence for spare parts for agricultural tractors and/or tractor drawn agricultural implements can be utilised for import of complete piston assemblies of any size except for restricted models upto the ceiling of Rs. 4,000 as against the ceiling of Rs. 3,000 during the previous period.

**B. Piston Rings**

*October 1957 to March 1958*

Established importers were granted a quota of 50% General and 50% Soft with the proviso that not more than 25% of the face value of these quota licences could be utilised for import of piston rings of 6" dia. and below. Further, piston rings (both of 6" dia. and below, and over 6" dia.) were also permitted to be imported when imported with (a) original equipment either C. K. D. or assembled, and (b) fitted to pistons when imported as complete piston assemblies.

*April 1958 to September 1958*

Policy for the above period was continued during this period also.

*October 1958 to March 1959*

Same as for October 1957 to April 1958. In addition, established importers of motorcycle spares having quotas for piston rings were granted additional licences for import of this item on the basis of a quota of 10% General and 10% Soft. The additional licences were valid only for import of piston rings specially adapted for use on motorcycles and scooters.

*April 1959 to September 1959*

Policy for this period was same as for October 1958 to March 1959. But, in addition, quota licences issued for spare parts of agricultural tractors and/or tractor drawn agricultural implements [Sl. No. 74(iii)V], were made valid for imports of piston rings of any size upto a ceiling of Rs. 500.

*October 1959 to March 1960*

Policy for the period was same as it was for the licensing period April 1959 to September 1959. Quota licences issued for spare parts of agricultural tractors and/or tractor drawn agricultural implements were made valid for imports of piston rings of any size upto a ceiling of Rs. 750 as against Rs. 500 during the previous licensing period.

*April 1960 to September 1960*

Policy continued to be the same as for the previous period except that the quota licence for spare parts for agricultural tractors and/or tractor drawn agricultural implements can be utilised for import of piston rings of any size upto the ceiling of Rs. 800 as against Rs. 750 for the previous licensing period.

**APPENDIX V**

(*Vide Paragraph 13-1)*

*Statement showing c. i. f. prices and landed cost as obtained from the Collectors of Customs and importers*

Sl. No.	Source of information	Origin of Import	Date of Import	Type & Specifications	Unit	C.I.F. price duty	Customs Clear- ing Charges	Landed cost	
1	2	3	4	5	6	7	8	9	10
<b>A. Piston Assembly</b>									
<b>Perkins P-6</b>									
1	Collector of Customs, Bombay	U.K.	Aug. 59	P. 181 Below 6 inches aluminium	Each	14.00	7.00	0.42	21.42
				Do. P. 181 aluminium	"	12.30	6.15	0.25	18.70
				Do. P. 181 aluminium with rings and circlips.	"	12.30	6.10	2.00	20.30
				Do. Nov. 59 Aluminium below 6 inches	"	21.26	10.50	0.24	32.00
				Do. Dec. 59 Aluminium below 6 inches	"	23.46	11.73	0.31	35.50
2	Collector of Customs, Madras	Do.	17-8-59	Size 3.501K	"	22.40	11.20	0.66	34.26
3	T. V. Sundram Iyengar & Sons Private Ltd.	Do.	3-2-59	P. 181C	"	19.80	8.42	1.06	29.38
4	India Motor Parts & Accessories Ltd.	Do.	25-9-59	P. 181C	"	18.87	8.02	0.24	27.13
5	Simpson & Co. Ltd., Madras	Do.	Dec. 59	Aluminium	"	18.68	7.94	0.13	26.75
				P. 6V Standard Assembly	"	18.33	7.83 (@42½%)	0.50	26.66

**APPENDIX V—contd.**

(Vide Paragraph 13·1)  
*Statement showing c. i. f. prices and landed cost as obtained from the Collectors of Customs and importers*

Sl. No.	Source of information	Origin of Import	Date of Import	Type & Specifications	Unit	C.I.F. price	Customs duty	Clear- ing Charges	Landed cost		
									1	2	3
<b>Standard-10</b>											
1	Collector of Customs, Bombay	U.K.	Nov. 59	Aluminium	Do.	8.94	4.47	0.10	13.51		
		Do.	Jan. 60		Do.	8.43	4.21	0.12	12.76		
		Do.	Jan. 60		Do.	9.08	4.54	0.30	13.92		
		Do.	Nov. 59		Do.	9.00	4.50	0.25	13.75		
2	Collector of Customs, Madras	Do.	15-5-59	Standard 10 covers 63 mm.	Do.	10.25	5.12	0.30	15.67		
3	Madras Auto Service (P) Ltd.	Do.	27-11-59	Aluminium for Standard-10	Do.	8.00	4.00	0.16	12.16		
4	T. V. Sundram Iyengar Sons.	Do.	25-9-59	St-404	Do.	8.17	4.09	0.24	12.50		
<b>Fiat</b>											
1	Collector of Customs, Bombay	Do.	Feb. 60	Aluminium	Do.	9.34	4.67	0.30	14.31		
		Do.	Nov. 59		Do.	7.29	3.64	0.25	11.18		
		Do.	Do.		Do.	39.00	19.50	0.40	58.90		
2	Collector of Customs, Madras	Do.	15-5-59	Covmo-68 mm.	Do.	10.25	5.12	0.30	15.67		
3	Madras Auto Service (P) Ltd.	Do.	6-6-59	8178 for Fiat 1100/103	Do.	8.31	4.15	0.25	12.71		
4	India Motor Car & Accessories Pvt. Ltd., Madras.	Do.	Sept. 59	Bricovmo aluminium	Do.	8.33	4.17	0.07	12.57		
		Dec. 59	Specialloid	Do.	8.66	4.33	0.07	13.06			

Collector of Customs, Bombay		<i>Standard Vanguard</i>					
Do.	Aug. 59	Aluminium 85 mm.	:	:	:	13.00	6.50
Do.	Feb. 60	Aluminium . . .	:	:	:	12.26	6.13
T. V. Sundram Iyengar & Sons (P) Ltd.	Do.	Vauxhall				1.00	20.50
	14-2-59	Z4191, 4292 & 4193 for Vauxhall velox.	"	9.00	4.50	0.13	13.63
	Do.	14-2-59 Z4196, 4199, 4200, 4202 & 4203 for Vauxhall LIX12/4.	"	9.40	4.70	0.13	14.23
	Do.	5-1-60 Z4201 and 4202 for Vauxhall LIX12/4.	"	9.80	4.90	0.65	15.35
<i>Royal Enfield (Motor Cycle)</i>							
Collectors of Customs, Madras	Do.	26-12-59 500 C.C.J. 2	"	21.00	10.50	0.62	32.12
	Do.	26-12-56 250 C.C. Clipper	"	15.20	7.60	0.44	23.24
	Do.	26-12-56 500 C.C. for Bullet	"	26.67	13.33	0.80	40.80
	<i>Others</i>						
1 Collector of Customs, Bombay	Do.	Aug. 59 Chevrolet	"	10.58	5.29	1.75	17.62
	Do.	Dec. 59 Chevrolet Cast iron	Per set	61.14	30.57	3.00	94.71
	Do.	Dec. 59 Do.		61.48	30.74	3.00	95.22
	Do.	Dec. 59 Studebaker Aluminium	Each	12.50	6.25	0.38	19.13
	Do.	Dec. 59 Dodge Aluminium	"	8.30	4.15	0.25	12.70
2 Madras Auto Service (P) Ltd.	W.	20-3-59 Mercedes Benz	"	42.25	21.13	1.20	64.58
	Germany	"					
	Do.	10-3-59 Daimler Benz	"	43.19	21.60	1.00	65.79
3 T. V. Sundram Iyengar Sons (P) Ltd.	Do.	"					
4 Party & Co.	Do.	"					

## APPENDIX V—*contd.*

(Vide Paragraph 13·1)

*Statement showing c. i. f. prices and landed cost as obtained from the Collectors of Customs and importers*

Sl. No.	Source of information	Origin of Import	Date of Import	Type and Specifications	Unit	C.i.f. price	Customs duty	Clear- ing charges	Landed cost			
										1	2	3
<b>B. Pistons</b>												
1	Collector of Customs, Bombay	U.K.	Aug. 59	P. 181 below 6' Aluminium	Each	10.00	5.00	0.75	15.75			
		Do.	Aug. 59	Do.	"	11.00	5.50	0.92	17.42			
		Do.	Aug. 59	Do.	"	10.50	5.25	0.32	16.07			
		Do.	Aug. 59	Below 6	"	10.00	5.00	0.75	15.75			
2	India Motor Parts & Accessories (Private) Ltd.	Do.	Dec. 59	Aluminium 3½" bore	"	18.68	7.94	0.13	26.75			
				Standard	—							
	Collector of Customs, Bombay	Do.	Jan. 60	—	—							
1	Collector of Customs, Bombay	Do,	Jan. 60	Aluminium	"	1.78	0.89	0.07	2.74			
				Fiat-1100	"	3.00	1.50	0.07	4.57			

2 India Motor Parts & Accessories (Private) Ltd. Madras.							41
Ashok Leyland Ltd., . . . .	Do. . . .	1959	Leyland 3-96' bore	. . . .	22.16	9.42	0.22 31.80
1 Collector of Customs, Bombay	Do.	Aug. 59	Perkins	C. Piston Rings	18.00	9.00	1.00 28.00
Collector of Customs, Madras . . .	Do.	16-6-56	Perkins P-6	Per set	24.00	12.00	0.72 36.72
Do.	10-2-60	For Hindustan Car	Set of 24 rings	Set of 6 rings	12.00	6.00	0.36 18.36
3 Madras Auto Service (P) Ltd. . . .	Do.	4-1-60	. . . .	Set	17.39	7.39	0.26 25.04
<b>D. Gudgeon Pins</b>							
1 Collector of Customs, Bombay	Do.	Aug. 59	Lister 5/1 Diesel	Each	4.00	2.00	0.59 6.59
2 Collector of Customs Madras	Do.	2-2-60	Perkins P-6	Set of six	5.67	2.83	0.16 8.66
3 Ashok Leyland Ltd. . . .	Do.	1959	Leyland	.. .	7.44	3.16	0.07 10.67



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